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EXAMINER
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HENNING, MATTHEW T

ART UNIT	PAPER NUMBER
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2131

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

09/888,316

Applicant(s)

VOLPERT, THOMAS R.

Examiner

Matthew T. Henning

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-10,21-23 and 25-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-10,21-23 and 25-62 is/are rejected.
- 7) ☒ Claim(s) 10,23,32,33,40,45-47,55,60 and 61 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1 This action is in response to the communication filed on 11/7/2006.

2 **DETAILED ACTION**

3 ***Continued Examination Under 37 CFR 1.114***

4 A request for continued examination under 37 CFR 1.114, including the fee set forth in  
5 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is  
6 eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)  
7 has been timely paid, the finality of the previous Office action has been withdrawn pursuant to  
8 37 CFR 1.114. Applicant's submission filed on 11/7/2006 has been entered.

9 ***Response to Arguments***

10 Applicant's arguments filed 11/7/2006 have been fully considered but are moot in view of  
11 the new grounds of rejection presented below.

12 All objections and rejections not set forth below have been withdrawn.

13 ***Claim Objections***

14 Claims 10, 32-33, 40, 45-47, 55, and 60-61 are objected to under 37 CFR 1.75(c), as  
15 being of improper dependent form for failing to further limit the subject matter of a previous  
16 claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in  
17 proper dependent form, or rewrite the claim(s) in independent form. All of these claims recite  
18 limitations that broadens its parent claim. These claims each require that the control code be  
19 generated based on frequency analysis of the input data string, while the independent claims  
20 recite that the control code is generated independent of specific characteristics of the input data  
21 string. As such, the dependent claims broaden this particular portion of the claim language.

22

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1 Claim 23 is objected to because of the following informalities: Lines 2-3 recite the  
2 limitation "the input data string" which lacks antecedent basis in the claim. The examiner will  
3 assume this was meant to read "an input data string".  
4

5 Appropriate correction is required.

6 ***Claim Rejections - 35 USC § 103***

7 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all  
8 obviousness rejections set forth in this Office action:

9 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in  
10 section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are  
11 such that the subject matter as a whole would have been obvious at the time the invention was made to a person  
12 having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the  
13 manner in which the invention was made.  
14

15 Claims 1, 3, 5, 8-10, 21-23, 25-26, 29-40, 44-55, and 59-62 are rejected under 35  
16 U.S.C. 103(a) as being unpatentable over De Maine et al. (US Patent Number 3,656,178)  
17 hereinafter referred to as De Maine, and further in view of Cellier et al. (US Patent Number  
18 5,884,269) hereinafter referred to as Cellier, and further in view of Witten et al. ("On the Privacy  
19 Afforded by Adaptive Text Compression) hereinafter referred to as Witten.

20 Regarding claim 1, De Maine disclosed a method of encrypting an input data string  
21 including a plurality of bits of binary data with a processing device communicatively coupled to  
22 a memory having executable instructions stored therein which cause the device to implement a  
23 method of encryption, the method comprising: receiving an input data string for encryption at the  
24 processing device (See De Maine Col. 91 Lines 67-73); determining an order in which to query  
25 the presence of each of  $2^n$  different configurations of  $n$  bits within an input data string (See De

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1 Maine Col. 91 Lines 67-74, 256 Byte Table); generating a code associated with the determined  
2 order (See De Maine Col. 92 Lines 5-10, Type 2 codes); generating a position code by  
3 identifying the positions of each of the  $2^n$  different configurations of n bits in an input data string  
4 in accordance with the determined order (See De Maine Col. 92 Lines 31-39, Bit Map); and  
5 combining the control code and the position code to form an encrypted data string (See De  
6 Maine Col. 92 Lines 40-44), however, De Maine did not specifically disclose providing a control  
7 code index that is defined prior to receiving the input data string for encryption at the processor,  
8 the control code index including a plurality of control codes wherein the values of the plurality of  
9 control codes are independent of input data string specific characteristics, or generating a control  
10 code using the control code index. De Maine further failed to disclose that the control code is  
11 selected independent of specific characteristics of the input data string.

12 Cellier teaches that in a coding method, a table dictionary (control code index) including  
13 a plurality of tables should be incorporated and table select (control code), for identifying which  
14 table was used in the coding method, should be “generated” (chosen from the index) and  
15 included with the encoded data (See Cellier Col. 4 Line 46 – Col. 5 Line 55 and Col. 13 Lines  
16 24-33).

17 Witten teaches that in a compression system which uses frequency analysis to adapt to  
18 the input text for optimal compression, an initial model, perhaps randomly generated, should be  
19 used in order to secure the data being compressed from being decompressed without knowing the  
20 initial model, or key (See Witten Section 7).

1           It would have been obvious to the ordinary person skilled in the art at the time of  
2   invention to employ the teachings of Cellier in the coding system of De Maine by providing a  
3   table dictionary including tables (See De Maine Col. 91 Lines 67-74) which are identified using  
4   a table select (control code) and including the table select with the encoded data in order to allow  
5   the decoder to identify which table was used for encoding. This would have been obvious  
6   because the ordinary person skilled in the art would have been motivated to provide a highly  
7   efficient and compact way of mapping the statistics of the input string in order to identify the  
8   encoding table. It further would have been obvious to the ordinary person skilled in the art at the  
9   time of invention to employ the teachings of Witten in the system of De Maine by randomly  
10   choosing the byte table. This would have been obvious because the ordinary person skilled in  
11   the art would have been motivated to secure the compressed data against illicit decompression.  
12   In this combination it would be obvious, based on logical reasoning, that the table select would  
13   be chosen to identify the randomly generated table in the dictionary.

14           Regarding claim 21, De Maine disclosed a method for encrypting an input data string  
15   including a plurality of bits of binary data (See De Maine Col. 2 Paragraph 1), the method  
16   comprising: receiving an input data string for encryption (See De Maine Col. 91 Lines 67-74);  
17   determining an order in which to query the presence of each of  $2^n$  different configurations of  $n$   
18   bits within an input data string (See De Maine Col. 91 Lines 67-74, 256 Byte Table); generating  
19   a code associated with the determined order (See De Maine Col. 92 Lines 5-10, Type 2 codes);  
20   generating a position code by identifying the positions of each of the  $2^n$  different configurations  
21   of  $n$  bits in an input data string in accordance with the determined order (See De Maine Col. 92  
22   Lines 31-39, Bit Map); and combining the control code and the position code to form an

1 encrypted data string (See De Maine Col. 92 Lines 40-44), however, De Maine did not  
2 specifically disclose providing a control code index that is defined prior to receiving the input  
3 data string for encryption at the processor, the control code index including a plurality of control  
4 codes wherein the values of the plurality of control codes are independent of input data string  
5 specific characteristics, or generating a control code using the control code index. De Maine  
6 further failed to disclose that the control code is selected independent of specific characteristics  
7 of the input data string.

8 Cellier teaches that in a coding method, a table dictionary (control code index) including  
9 a plurality of tables should be incorporated and table select (control code), for identifying which  
10 table was used in the coding method, should be "generated" (chosen from the index) and  
11 included with the encoded data (See Cellier Col. 4 Line 46 – Col. 5 Line 55 and Col. 13 Lines  
12 24-33).

13 Witten teaches that in a compression system which uses frequency analysis to adapt to  
14 the input text for optimal compression, an initial model, perhaps randomly generated, should be  
15 used in order to secure the data being compressed from being decompressed without knowing the  
16 initial model, or key (See Witten Section 7).

17 It would have been obvious to the ordinary person skilled in the art at the time of  
18 invention to employ the teachings of Cellier in the coding system of De Maine by providing a  
19 table dictionary including tables (See De Maine Col. 91 Lines 67-74) which are identified using  
20 a table select (control code) and including the table select with the encoded data in order to allow  
21 the decoder to identify which table was used for encoding. This would have been obvious

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1 because the ordinary person skilled in the art would have been motivated to provide a highly  
2 efficient and compact way of mapping the statistics of the input string in order to identify the  
3 encoding table. It further would have been obvious to the ordinary person skilled in the art at the  
4 time of invention to employ the teachings of Witten in the system of De Maine by randomly  
5 choosing the byte table. This would have been obvious because the ordinary person skilled in  
6 the art would have been motivated to secure the compressed data against illicit decompression.  
7 In this combination it would be obvious, based on logical reasoning, that the table select would  
8 be chosen to identify the randomly generated table in the dictionary.

9       Regarding claim 23, De Maine disclosed a computer readable medium including  
10 computer program instructions that cause a computer to implement a method of encrypting an  
11 input data string, including a plurality of bits of binary data (See De Maine Col. 2 Paragraph 1),  
12 the method comprising: receiving an input data string for encryption (See De Maine Col. 91  
13 Lines 67-74); determining an order in which to query the presence of each of  $2^n$  different  
14 configurations of  $n$  bits within an input data string (See De Maine Col. 91 Lines 67-74, 256 Byte  
15 Table); generating a code associated with the determined order (See De Maine Col. 92 Lines 5-  
16 10, Type 2 codes); generating a position code by identifying the positions of each of the  $2^n$   
17 different configurations of  $n$  bits in an input data string in accordance with the determined order  
18 (See De Maine Col. 92 Lines 31-39, Bit Map); and combining the control code and the position  
19 code to form an encrypted data string (See De Maine Col. 92 Lines 40-44), however, De Maine  
20 did not specifically disclose providing a control code index that is defined prior to receiving the  
21 input data string for encryption at the processor, the control code index including a plurality of  
22 control codes wherein the values of the plurality of control codes are independent of input data



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1 string specific characteristics, or generating a control code using the control code index. De  
2 Maine further failed to disclose that the control code is selected independent of specific  
3 characteristics of the input data string.

4 Cellier teaches that in a coding method, a table dictionary (control code index) including  
5 a plurality of tables should be incorporated and table select (control code), for identifying which  
6 table was used in the coding method, should be “generated” (chosen from the index) and  
7 included with the encoded data (See Cellier Col. 4 Line 46 – Col. 5 Line 55 and Col. 13 Lines  
8 24-33).

9 Witten teaches that in a compression system which uses frequency analysis to adapt to  
10 the input text for optimal compression, an initial model, perhaps randomly generated, should be  
11 used in order to secure the data being compressed from being decompressed without knowing the  
12 initial model, or key (See Witten Section 7).

13 It would have been obvious to the ordinary person skilled in the art at the time of  
14 invention to employ the teachings of Cellier in the coding system of De Maine by providing a  
15 table dictionary including tables (See De Maine Col. 91 Lines 67-74) which are identified using  
16 a table select (control code) and including the table select with the encoded data in order to allow  
17 the decoder to identify which table was used for encoding. This would have been obvious  
18 because the ordinary person skilled in the art would have been motivated to provide a highly  
19 efficient and compact way of mapping the statistics of the input string in order to identify the  
20 encoding table. It further would have been obvious to the ordinary person skilled in the art at the  
21 time of invention to employ the teachings of Witten in the system of De Maine by randomly

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1 choosing the byte table. This would have been obvious because the ordinary person skilled in  
2 the art would have been motivated to secure the compressed data against illicit decompression.  
3 In this combination it would be obvious, based on logical reasoning, that the table select would  
4 be chosen to identify the randomly generated table in the dictionary.

5       Regarding claim 62, De Maine disclosed an electronic device for encrypting an input data  
6 string, including a plurality of bits of binary data, comprising: a processor configured to receive  
7 an input data string for encryption (See De Maine Col. 91 Lines 67-73); determining upon  
8 reception of the input data string, an order in which to query the presence of each of two  $2^n$   
9 different configurations of  $n$  bits within an input data string (See De Maine Col. 91 Lines 67-74,  
10 256 Byte Table), and generates a code associated with the determined order (See De Maine Col.  
11 92 Lines 5-10, Type 2 codes), the processor generating a position code, through the identification  
12 of positions of each of the two  $2^n$  different configurations of  $n$  bits in the input data string in  
13 accordance with the determined order (See De Maine Col. 92 Lines 31-39, Bit Map) to combine  
14 the control code and the position code to form an encrypted data string (See De Maine Col. 92  
15 Lines 40-44), however, De Maine did not specifically disclose providing a control code index  
16 that is defined prior to receiving the input data string for encryption at the processor, the control  
17 code index including a plurality of control codes wherein the values of the plurality of control  
18 codes are independent of input data string specific characteristics, or generating a control code  
19 using the control code index. De Maine further failed to disclose that the control code is selected  
20 independent of specific characteristics of the input data string.

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1 Cellier teaches that in a coding method, a table dictionary (control code index) including  
2 a plurality of tables should be incorporated and table select (control code), for identifying which  
3 table was used in the coding method, should be “generated” (chosen from the index) and  
4 included with the encoded data (See Cellier Col. 4 Line 46 – Col. 5 Line 55 and Col. 13 Lines  
5 24-33).

6 Witten teaches that in a compression system which uses frequency analysis to adapt to  
7 the input text for optimal compression, an initial model, perhaps randomly generated, should be  
8 used in order to secure the data being compressed from being decompressed without knowing the  
9 initial model, or key (See Witten Section 7).

10 It would have been obvious to the ordinary person skilled in the art at the time of  
11 invention to employ the teachings of Cellier in the coding system of De Maine by providing a  
12 table dictionary including tables (See De Maine Col. 91 Lines 67-74) which are identified using  
13 a table select (control code) and including the table select with the encoded data in order to allow  
14 the decoder to identify which table was used for encoding. This would have been obvious  
15 because the ordinary person skilled in the art would have been motivated to provide a highly  
16 efficient and compact way of mapping the statistics of the input string in order to identify the  
17 encoding table. It further would have been obvious to the ordinary person skilled in the art at the  
18 time of invention to employ the teachings of Witten in the system of De Maine by randomly  
19 choosing the byte table. This would have been obvious because the ordinary person skilled in  
20 the art would have been motivated to secure the compressed data against illicit decompression.  
21 In this combination it would be obvious, based on logical reasoning, that the table select would  
22 be chosen to identify the randomly generated table in the dictionary.

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1           Regarding claims 3 and 25, De Maine, Cellier, and Witten disclosed determining an order  
2     comprises selecting a predetermined order (See De Maine Col. 91, 256 Byte Table and the  
3     rejection of claim 1 above).

4           Regarding claims 5, 22, and 26, De Maine, Cellier, and Witten disclosed dividing the  
5     input data string into a plurality of blocks of data (See De Maine Col. 92 Lines 31-38).

6           Regarding claim 8, and 30, De Maine, Cellier, and Witten disclosed generating a plurality  
7     of block codes associated with a plurality of blocks of data, each block code indicating the  
8     number of bits within the associated block of data (See De Maine Col. 101 Lines 45-52).

9           Regarding claim 9, and 31, De Maine, Cellier, and Witten disclosed combining the each  
10    of the plurality of block codes with the control code and the position code for the associated  
11    block of data (See De Maine Col. 101 Lines 45-52 and the rejection of claim 1 above).

12          Regarding claim 10, and 32, De Maine, Cellier, and Witten disclosed that determining an  
13    order comprises determining an order based on the frequencies of the  $2^n$  combinations of the  $n$   
14    bits of the input data string (See De Maine Col. 101 Lines 20-25).

15          Regarding claims 29, and 50, De Maine, Cellier, and Witten disclosed that the computer  
16    readable code for determining an order further comprises computer readable code for  
17    determining a first order associated with a first block of data and determining a second order  
18    associated with a second block of data wherein the first order is different than the second order  
19    (See De Maine Col. 91 Lines 67-74).

1           Regarding claim 33, De Maine, Cellier, and Witten disclosed that the computer readable  
2     code for determining an order further comprises computer readable code for determining an  
3     order in which to query the presence of each of  $2^n$  different configurations of  $n$  bits based on an  
4     analysis of the input data (See De Maine Col. 91 Lines 67-74).

5           Regarding claims 34 and 48, De Maine, Cellier, and Witten disclosed generating the  
6     control code randomly (See the rejection of claim 1 above and Witten Section 7).

7  
8           Regarding claims 35, and 49, De Maine, Cellier, and Witten disclosed generating the  
9     control code based on a rule set (See the rejection of claim 1 above and Witten Section 7).

10          Regarding claims 36 and 51, De Maine, Cellier, and Witten disclosed determining  
11     whether the input data string can be compressed simultaneously as it is encrypted (See De Maine  
12     Col. 101 Lines 20-28).

13          Regarding claims 37 and 52, De Maine, Cellier, and Witten disclosed dividing the input  
14     data string into  $n$  bit sequences (See De Maine Col. 91 Lines 67-74); comparing each of the  $2^n$   
15     different configurations of  $n$  bits with each of the  $n$  bit sequences (See De Maine Col. 91 Lines  
16     67-74); determining the frequency of each of the  $2^n$  different configurations appearing in the  
17     input data string (See De Maine Col. 91 Lines 67-74); determining whether a specific  
18     relationship exists between values of the frequencies of each of the individual  $2^n$  different  
19     configurations appearing in the input data string wherein the existence of the specific  
20     relationship is indicative of the presence of a characteristic within the input data string and  
21     wherein the presence of the characteristic indicates that the input data string can be compressed

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1 simultaneously as it is encrypted (See De Maine Col. 101 Lines 20-25); selecting a first position  
2 code routine associated with the determined order when the specific relationship exists, the first  
3 position code being operable to encrypt and compress the input data string (See De Maine Col.  
4 101 Lines 20-25 and Col. 92 Paragraphs 1-2); and selecting a second position code routine  
5 associated with the determined order when the specific relationship does not exist, the second  
6 position code being operable to encrypt the input data string without any compression (See De  
7 Maine Col. 101 Lines 20-25 and Col. 92 Paragraphs 1-2).

8       Regarding claims 38 and 53, De Maine, Cellier, and Witten disclosed that the  
9 determining the order in which to query the presence of each of  $2^n$  different configurations of  $n$   
10 bits within an input data string comprises computer readable code for determining the order in  
11 which to query the presence of each of  $2^2$  different configurations of 2 bits within an input data  
12 string (See De Maine Col. 91 Lines 47-48).

13       Regarding claims 39 and 54, De Maine, Cellier, and Witten disclosed dividing the input  
14 data string into  $n$  bit sequences (See De Maine Col. 91 Lines 67-74); comparing each of the  $2^n$   
15 different configuration of  $n$  bits with each of the  $n$  bit sequences of the input data string (See De  
16 Maine Col. 91 Lines 67-74); determining a first number representative of the number of times  
17 the most frequently occurring  $2^n$  configuration appears in the input string; determining a second  
18 number representative of the number of times the second most frequently occurring  $2^n$   
19 configuration appears in the input string; determining a third number representative of the  
20 number of times the third most frequently occurring  $2^n$  configuration appears in the input string  
21 determining a fourth number representative of the number of times the fourth most frequently

1 occurring 2<sup>n</sup> configuration appears in the input string (See De Maine Col. 91 Lines 67-74);  
2 selecting a first position code routine associated with the determined order when the first number  
3 is greater than the sum of the third number and the fourth number, the first position code routine  
4 being operable to encrypt and compress the input data string (See De Maine Col. 92 Paragraphs  
5 1-2 and Col. 101 Lines 20-27); and selecting a second position code routine associated with the  
6 determined order when the first number is not greater than the sum of the third number and the  
7 fourth number, the second position code routine being operable to encrypt the input data string  
8 without any compression (See De Maine Col. 92 Paragraphs 1-2 and Col. 101 Lines 20-27).

9       Regarding claims 40 and 55, De Maine, Cellier, and Witten disclosed that generating a  
10 control code associated with the determined order, further comprises: generating a first control  
11 code associated with the determined order when the first position code routine is selected; and  
12 generating a second control code associated with the determined order when the second position  
13 code routine is selected wherein the first control code is different than the second control code  
14 (See De Maine Col. 92 Paragraphs 1-2).

15       Regarding claims 44 and 59, De Maine, Cellier, and Witten disclosed selecting a default  
16 order (See De Maine Col. 91 Lines 67-74 and the rejection of claim 1 above).

17       Regarding claims 45-46 and 60-61, De Maine, Cellier, and Witten disclosed determining  
18 an order based on the relative frequencies of the combinations of n bits (See De Maine Col. 91  
19 Lines 67-74).

20       Regarding claim 47, De Maine, Cellier, and Witten disclosed determining the order based  
21 on an analysis of the input data string (See De Maine Col. 91 Lines 67-74).

1  
2           Claims 6-7, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over De  
3   Maine, Cellier, and Witten as applied to claims 5, and 26 respectively, and further in view of  
4   Shimizu et al. (US Patent Number 6,772,343) hereinafter referred to as Shimizu.

5           De Maine, Cellier, and Witten disclosed blocking the input data into block sizes of a  
6   certain range (See De Maine Col. 92 Lines 31-38) but failed to disclose determining the size of  
7   the blocks randomly or according to a rule set.

8           Shimizu teaches that in a block encoding system, generating each block size randomly  
9   makes illicit access of the data more difficult and makes the cryptosystem more robust (See  
10   Shimizu Col. 5 Lines 9-18). Shimizu further teaches that the random sizes are generated  
11   mathematically using a seed (See Shimizu Col. 15 Paragraphs 3-7).

12           It would have been obvious to the ordinary person skilled in the art at the time of  
13   invention to employ the teachings of Shimizu in the invention of De Maine, Cellier, and Witten  
14   to mathematically generate random block lengths. This would have been obvious because the  
15   ordinary person skilled in the art would have been motivated to provide the added security of  
16   random block lengths to the compressed data.

17  
18           Claims 41-42, and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over  
19   De Maine, Cellier, and Witten as applied to claim 1 above, and further in view of Weiss (US  
20   Patent Number 5,479,512).

21           De Maine, Cellier, and Witten disclosed compressing input data (See De Maine Cols. 91-  
22   92), but failed to disclose re-encrypting the data after the compression was performed.



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1 Weiss teaches that after compression is performed, the compressed data should be  
2 XORed with a key, in small blocks at a time (See Weiss Col. 5 Paragraphs 4-5 and Col. 6  
3 Paragraph 3 and Fig. 3A).

4 It would have been obvious to the ordinary person skilled in the art at the time of  
5 invention to employ the teachings of Weiss in the compression system of De Maine, Cellier, and  
6 Witten by XORing the coded data with a key in small blocks at a time. This would have been  
7 obvious because the ordinary person skilled in the art would have been motivated to protect the  
8 data from unauthorized observing.

9 Claims 41, 43, 56, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over  
10 De Maine, Cellier, and Witten as applied to claim 1 above, and further in view of Butler et al.  
11 (US Patent Number 5,861,887) hereinafter referred to as Butler.

12 De Maine, Cellier, and Witten disclosed compressing input data (See De Maine Cols. 91-  
13 92), but failed to disclose re-encrypting the data after compression was performed.

14 Butler teaches that compression should be repeated as many times as necessary in order  
15 to make the data being compressed sufficiently small (See Butler Col. 3 Paragraph 2).

16 It would have been obvious to the ordinary person skilled in the art at the time of  
17 invention to employ the teachings of Butler in the compression system of De Maine, Cellier, and  
18 Witten by repeating the compression on the coded output as many times as necessary to get the  
19 output to be sufficiently small. This would have been obvious because the ordinary person  
20 skilled in the art would have been motivated to provide more efficient storage of the audio data.

21

22

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*Conclusion*

Claims 1, 3, 5-10, 21-23, and 25-62 have been rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew T. Henning whose telephone number is (571) 272-3790.

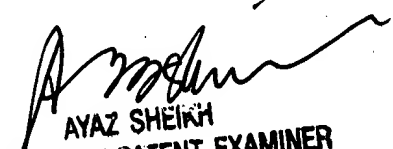
The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Matthew Henning  
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Art Unit 2131  
1/10/2007



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